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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/587,564	06/13/2007	Seung-Hoon Lee	BGG0004US	7176

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CANTOR COLBURN LLP  
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Hartford, CT 06103

EXAMINER
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MINSKEY, JACOB T

ART UNIT	PAPER NUMBER
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1741

NOTIFICATION DATE	DELIVERY MODE
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10/27/2010

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

usptopatentmail@cantorcolburn.com

<b>Office Action Summary</b>	<b>Application No.</b> 10/587,564	<b>Applicant(s)</b> LEE ET AL.	
	<b>Examiner</b> JACOB T. MINSKEY	<b>Art Unit</b> 1741	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 03 June 2010.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1,2,4-13,15-21 and 23-28 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-13,15-21 and 23-28 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>6/03/2010</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 6/03/2010 has been entered.

### ***Response to Arguments***

2. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.

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4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).
6. **Claims 1-2, 4-13, 15-21, and 23-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nishino et al, EP 0814193 (already of record) in view of Yamaguchi et al, USP 5,135,677.**
7. Regarding claim 1, Nishino teaches a method of bleaching a fiber material with by using a stabilizing (pretreatment) agent (see title and abstract) comprising adding a polymer (component A), a second homopolymer (component B), and a stabilizing agent (component C, reads on chelating agent, Diethylenetriaminepentaacetic acid or DTPA or TTHA, see abstract and [0038]). Component A is an alpha -hydroxyacrylic acid or water soluble salt [0022] that is a 80/20-95/5 mix of alpha -hydroxyacrylic acid to acrylic acid (weight of 3000-100,000, [0026]) and is pared with copolymer of acrylic acid, methacrylic acid and/or maleic acid of component B (see abstract and [0035]). Chelating agent (C) is then added in the provided ratio [0044-0045] (which read on the 1:4 – 4:1 ratio claimed.

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8. Nishino's primary polymer of alpha -hydroxyacrylic acid does not directly read on the formula that is presented in the independent claim.

9. In the same field of endeavor of water soluble polymers that are mixed with chelating agents (column 9 lines 12-22 and column 6 line 32- column 7 line 18), Yamaguchi teaches a process for the treatment of a fiber material (teaches the use of a solution for pulp bleaching, column 9 lines 25-27) comprising contacting the fiber material in an aqueous medium (column 9 lines 12-22) with a chelating agent (Yamaguchi teaches adding both a metal ion and a chelating agent with the polymer column 6 line 32 – column 7 line 18) and a polymer having the provided general formula [Polymer A = maleic acid, column 6 line 9, Polymer B = 3-allyloxy-2-hydroxypropanesulfonic acid, column 6 line 18] where the monomers are in a ratio of n (Polymer A) is 0-.95, m (Polymer B) is 0.05-.9, and k (optional component) is 0-.8, wherein  $n+m+k = 1$  (ratio of A/B is 50:50 to 99.9:0.01, column 6 lines 21-31), and wherein the weight average molecular weight is between 500 and 20,000,000 g/mol (300-5000, claim 1); and wherein the fiber material is a cellulosic fiber material comprising chemical, mechanical, or chemi- mechanical pulp or a recycled fiber material (column 9 lines 23-31 teaches that the process is used on pulp bleaching and deinking waste paper).

10. It would have been obvious to one of ordinary skill in the art at the time of the invention to make the simple substitution of Nishino's alpha -hydroxyacrylic acid with Yamaguchi's 3-allyloxy-2-hydroxypropanesulfonic acid because Yamaguchi teaches that both are viable alternatives to each other (column 5 line 9 - column 6 line 21), and

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one of ordinary skill in the art would have been able to carry out such a substitution to achieve the predictable result of treating the fiber material to the desired end result.

“The combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results.” KSR Int’l Co V. Teleflex Inc, 127 S.Ct. 1727, 82 USPQ2d 1385 (2007).

11. Regarding claim 2, Nishino further teaches that the components A, B, and C are mixed together [0044].

12. Regarding claims 4-6 and 8, Yamaguchi further teaches that the fiber bleaching is preceded by a treatment with a chelating agent (example 81 teaches adding the chelating agent in the initial stages, and pre-treating pulp prior to bleaching, column 9 line 26). Furthermore, Nishino also further teaches that the chelating agent is added as a pretreatment (see abstract) and that the additives are used in peroxide bleaching methods [0017].

13. Regarding claim 7, Nishino further teaches that the solution has a ph as low as 6 [0062]. Furthermore, Yamaguchi remains as applied above, but is silent on the pH of the medium during treatment (but does teach that it is known in the art to keep the aqueous solution at a pH of 2-7 in order to yield the desired polymer, column 3 line 38).

14. It would have been obvious to one of ordinary skill in the art at the time of the invention to have determined the optimum values of the relevant process parameters through routine experimentation (and common knowledge of pulping procedures). In re Aller, USPQ 233, CCPA 1955.

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15. Regarding claim 9, Nishino further teaches the use of hydrogen peroxide as the bleaching agent [0068].

16. Regarding claims 10, Yamaguchi further teaches that the fiber material comprises a recycled fiber material, and wherein the treatment further comprises deinking the recycled fiber material in the aqueous medium comprising the chelating agent and the polymer (deinking waste paper, column 9 lines 22-32). Furthermore, Nishino teaches that the fibers are of waste paper pulp fibers [0058].

17. Regarding claims 11-12 and 15, Yamaguchi remains as applied in claim 1 above.

18. Regarding claim 13, Nishino further teaches that the pretreatment solution is added 0.1-3% by weight of fiber (which reads on the 0.5-10 kg/ton [0062]).

19. Regarding claims 16-18, Nishino and Yamaguchi both teach the use of known chelating agents. Nishino explicitly provides examples of Diethylenetraiminepentaacetic acid or DTPA or TTHA (see abstract and [0038]).

20. The Applicant also admits that it is well known in the pulp and paper industry to utilize chelating agents to remove harmful components of the solution prior to bleaching with peroxide [0002]. Applicant further states that there is a large group of chelating agents that can be utilized and have been utilized in the past [0003 and 0010].

Applicant provides a group of chelating agents that can be utilized in the instant application, and also states that all three different formulas provides are of "commercially available" chelating agents [0054-0086].

21. Furthermore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use one of the known chelating agents presented in the method

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taught by Nishino because one of ordinary skill in the art would have been able to carry out such a substitution to achieve the predictable result of removing harmful components from the solution/slurry. "The combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results." KSR Int'l Co V. Teleflex Inc, 127 S.Ct. 1727, 82 USPQ2d 1385 (2007).

22. Regarding claims 19 and 24, Nishino teaches a method of bleaching a fiber material with by using a stabilizing (pretreatment) agent (see title and abstract) comprising adding a polymer (component A), a second homopolymer (component B), and a stabilizing agent (component C, reads on chelating agent, Diethylenetriaminepentaacetic acid or DTPA or TTHA, see abstract and [0038]). Component A is an alpha -hydroxyacrylic acid or water soluble salt [0022] that is a 80/20-95/5 mix of alpha -hydroxyacrylic acid to acrylic acid (weight of 3000-100,000, [0026]) and is pared with copolymer of acrylic acid, methacrylic acid and/or maleic acid of component B (see abstract and [0035]). Chelating agent (C) is then added in the provided ratio [0044-0045] (which read on the 1:4 – 4:1 ratio claimed).

23. Nishino's primary polymer of alpha -hydroxyacrylic acid does not directly read on the formula that is presented in the independent claim.

24. In the same field of endeavor of water soluble polymers that are mixed with chelating agents (column 9 lines 12-22 and column 6 line 32- column 7 line 18), Yamaguchi teaches a process for the treatment of a fiber material (teaches the use of a solution for pulp bleaching, column 9 lines 25-27) comprising contacting the fiber material in an aqueous medium (column 9 lines 12-22) with a chelating agent



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(Yamaguchi teaches adding both a metal ion and a chelating agent with the polymer column 6 line 32 – column 7 line 18) and a polymer having the provided general formula [Polymer A = maleic acid, column 6 line 9, Polymer B = 3-allyloxy-2-hydroxypropanesulfonic acid, column 6 line 18] where the monomers are in a ratio of n (Polymer A) is 0-.95, m (Polymer B) is 0.05-.9, and k (optional component) is 0-.8, wherein  $n+m+k = 1$  (ratio of A/B is 50:50 to 99.9:0.01, column 6 lines 21-31), and wherein the weight average molecular weight is between 500 and 20,000,000 g/mol (300-5000, claim 1); and wherein the fiber material is a cellulosic fiber material comprising chemical, mechanical, or chemi- mechanical pulp or a recycled fiber material (column 9 lines 23-31 teaches that the process is used on pulp bleaching and deinking waste paper).

25. It would have been obvious to one of ordinary skill in the art at the time of the invention to make the simple substitution of Nishino's alpha -hydroxyacrylic acid with Yamaguchi's 3-allyloxy-2-hydroxypropanesulfonic acid because Yamaguchi teaches that both are viable alternatives to each other (column 5 line 9 - column 6 line 21), and one of ordinary skill in the art would have been able to carry out such a substitution to achieve the predictable result of treating the fiber material to the desired end result. "The combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results." KSR Int'l Co V. Teleflex Inc, 127 S.Ct. 1727, 82 USPQ2d 1385 (2007).

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26. Nishino and Yamaguchi both teach the use of known chelating agents. Nishino explicitly provides examples of Diethylenetraiminepentaacetic acid or DTPA or TTHA (see abstract and [0038]).

27. The Applicant also admits that it is well known in the pulp and paper industry to utilize chelating agents to remove harmful components of the solution prior to bleaching with peroxide [0002]. Applicant further states that there is a large group of chelating agents that can be utilized and have been utilized in the past [0003 and 0010].

Applicant provides a group of chelating agents that can be utilized in the instant application, and also states that all three different formulas provides are of "commercially available" chelating agents [0054-0086].

28. Furthermore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use one of the known chelating agents presented in the method taught by Nishino because one of ordinary skill in the art would have been able to carry out such a substitution to achieve the predictable result of removing harmful components from the solution/slurry. "The combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results." KSR Int'l Co V. Teleflex Inc, 127 S.Ct. 1727, 82 USPQ2d 1385 (2007).

29. Regarding claims 20-21 and 23, please refer to rejection presented above (for claim 19).

30. Regarding claims 25 and 26, Yamaguchi further teaches that the fiber material comprises a recycled fiber material, and wherein the treatment further comprises deinking the recycled fiber material in the aqueous medium comprising the chelating agent

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and the polymer (deinking waste paper, column 9 lines 22-32). Furthermore, Nishino teaches that the fibers are of waste paper pulp fibers [0058].

31. Regarding claims 27 and 28, the formulas provide components n and k as potentially being the same monomer (see formula present in independent claims).

While the Nishino and Yamaguchi references are silent on the exact break down of the polymer's structure, it would have been obvious to one of ordinary skill in the art that the percentages of component "n" would also include values of component "k" if they are the same monomer. This would provide numbers given by the percentages to obviously read on the current claim limitations.

**32. Claims 19-21 and 23-25 rejected under 35 U.S.C. 103(a) as being unpatentable over Nishino et al, EP 0814193 (already of record) in view of Maeda et al, USP 6,780,832.**

33. Regarding claim 1, Nishino teaches a method of bleaching a fiber material with by using a stabilizing (pretreatment) agent (see title and abstract) comprising adding a polymer (component A), a second homopolymer (component B), and a stabilizing agent (component C, reads on chelating agent, Diethylenetraiminepentaacetic acid or DTPA or TTHA, see abstract and [0038]). Component A is an alpha -hydroxyacrylic acid or water soluble salt [0022] that is a 80/20-95/5 mix of alpha -hydroxyacrylic acid to acrylic acid (weight of 3000-100,000, [0026]) and is pared with copolymer of acrylic acid, methacrylic acid and/or maleic acid of component B (see abstract and [0035]). Chelating agent (C) is then added in the provided ratio [0044-0045] (which read on the 1:4 – 4:1 ratio claimed).

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34. Nishino's primary polymer of alpha -hydroxyacrylic acid does not directly read on the formula that is presented in the independent claim.

35. In the same field of endeavor of water soluble polymers that are mixed with chelating agents, Maeda teaches a process for the treatment of a fiber material (column 14 line 48 – column 15 line 40) comprising contacting the fiber material in an aqueous medium with a chelating agent (Maeda teaches that the polymer can be combined with alkali agents and surfactants in fiber treatment, column 15 line 35 as well as the addition of chelating agents in column 13 line 41 and 45-51) and a polymer having the provided general formula [Polymer A = maleic acid(-based) polymers (or their salts), column 8 line 20, Polymer B = 3-allyloxy-2-hydroxypropanesulfonic acid, column 10 line 4] where the monomers are in a ratio of n (Polymer A) is 0-.95, m (Polymer B) is 0.05-.9, and k (optional component) is 0-.8, wherein  $n+m+k = 1$  (ratio of A/B is 30/70-90/10, column 10 line 67), and wherein the weight average molecular weight is between 500 and 20,000,000 g/mol (3,000-100,000, column 9 line 14 and 1,000-10,000 column 10 line 8);

36. Maeda further teaches that the chelating agent is a compound having the following general formula wherein p is 0 or an integer of 1 to 10, R.sub.3, R.sub.4, R.sub.5, R.sub.6 and R.sub.7 are independently a hydrogen atom or an alkyl chain having 1 to 6 carbon atoms and containing an active chelating ligand (represented by EDTA, column 13, line 47).

37. It would have been obvious to one of ordinary skill in the art at the time of the invention to make the simple substitution of Nishino's alpha -hydroxyacrylic acid with Yamaguchi's 3-allyloxy-2-hydroxypropanesulfonic acid because Maeda teaches that

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both are viable alternatives to each other, and one of ordinary skill in the art would have been able to carry out such a substitution to achieve the predictable result of treating the fiber material to the desired end result. "The combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results." KSR Int'l Co V. Teleflex Inc, 127 S.Ct. 1727, 82 USPQ2d 1385 (2007).

38. Both references teach a method of utilizing a maleic acid based polymer and chelating agents in the bleaching process. Due to the fact that they are of the same field of endeavor (and solving the same problem of bleaching cellulose fibers/pulp) one of ordinary skill in the art at the time of the invention would have combined the two references to understand optimal and inherently properties that is not clearly stated in the other reference. One of ordinary skill in the art would have looked to both references in a proper combination of ideas.

39. Regarding claim 20, Maeda further teaches that the formula I n is 0.4 to 0.9, m is 0.1 to 0.5, and k is 0 to 0.5 (ratio of A/B is 90/10, column 10 line 67).

40. Regarding claim 21, Maeda further teaches that the weight average molecular weight of the copolymer is between 1,000 and 1,000,000 g/mol (3,000-100,000, column 9 line 14 and 1,000-10,000 column 10 line 8).

41. Regarding claim 23, Maeda further teaches that the polymer is a copolymer of 3-allyloxy-2-hydroxypropanesulfonic acid and at least one of acrylic acid, methacrylic acid, maleic acid, itaconic acid, or a salt thereof [Polymer A = maleic acid(-based) polymers

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(or their salts), column 8 line 20, Polymer B = 3-allyloxy-2-hydroxypropanesulfonic acid, column 10 line 4].

42. Regarding claim 24, Maeda further teaches that the chelating agent is a compound having the following general formula wherein p is 0 or an integer of 1 to 10, R.sub.3, R.sub.4, R.sub.5, R.sub.6 and R.sub.7 are independently a hydrogen atom or an alkyl chain having 1 to 6 carbon atoms and containing an active chelating ligand (represented by EDTA, column 13, line 47).

43. Regarding claim 25 Maeda further teaches that the treatment comprises bleaching the fiber material with an alkaline peroxide solution in the presence of the chelating agent and the polymer (column 15 line 2 and 35-40).

### ***Double Patenting***

44. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

45. A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

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46. Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

47. Claims 1-2, 4-13, 15-21, and 23-28 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 13-28, 7-8, 1-6, and 22 respectfully of copending Application No. 11/596140. Although the conflicting claims are not identical, they are not patentably distinct from each other because the only difference in the claims is the addition of requiring an alkaline earth metal compound. These compounds are commonly known in the art (as all of the cited references above mention the use of alkaline earth metals in some manner or another) and it would have been obvious to utilize these compounds in addition to the chelating agent and the polymer.

48. This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

49. Claims 1-2, 4-13, 15-21, and 23-28 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-28 of copending Application No. 12/523381. Although the conflicting claims are not identical, they are not patentably distinct from each other because the only difference in the claims is the addition of requiring a poly alpha hydroxyacrylic acid. These compounds are commonly known in the art (as all of the cited references above mention the use of alpha hydroxyacrylic acid in some manner or another) and it would have been obvious to utilize these compounds in addition to the chelating agent and the polymer.

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50. This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JACOB T. MINSKEY whose telephone number is (571)270-7003. The examiner can normally be reached on Monday to Friday 7:30-5:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Daniels can be reached on 571-272-2450. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JTM

/Matthew J. Daniels/  
Supervisory Patent Examiner, Art Unit 1741